

OVARIAN TORSION-FIVE CASE SERIES IN PRE-PUBERTAL, PUBERTAL, PREGNANCY AND REPRODUCTIVE AGE GROUP

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ABSTRACT

Ovarian torsion usually presents as acute pelvic pain with or without associated features (nausea, vomiting, fever, urinary and bladder symptoms) making it gynaecological emergency during reproductive years. Absence of definitive markers or investigations for the diagnosis, makes it difficult for the surgeon to conclude to definitive diagnosis. Timely intervention and management helps to make the ovarian tissue salvageable and prevent the complications.

KEYWORDS: Ovarian Torsion, Clinical Diagnosis, Exploratory Laparotomy, Laparoscopy, Oophoropexy

Article History

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INTRODUCTION

Ovarian torsion is defined as partial or complete rotation of ovary and adnexa upon the supplying vasculature pedicle consisting of infundibulopelvic ligament and tubo- ovarian ligament, resulting in ischemic changes of ovary. ⁽¹⁾ Ovarian torsion presents catastrophically and most of the time there would be loss of viable ovarian tissue as there are no predictors or pre monitory symptoms.

Ovarian torsion has prevalence of 2.5 to 7.4 % accounting to fifth most common gynaecological emergency with acute pelvic pain. ^(2,3) Its presentation is varied from pre pubertal to post-menopausal age groups with peak incidence between 20- 30 years of age. ⁽⁴⁾

We wish to present five cases of ovarian torsion belonged to different age groups (pre pubertal, pubertal, reproductive age group with pregnancy) presented to Dr. D.Y Patil medical college and hospital, Pune, Pimpri.

Case Report-1

A 12 years old girl presented to emergency with complaints of pain in abdomen for 2 days, radiating to back associated with episodes of fever and vomiting. On examination PR- 102bpm, BP- 110/70mmhg, RR-18cpm, oxygen saturation on room air-99% Tenderness and guarding present over left iliac fossa.

Ultrasound showed ovarian cyst of 68x34x36 mm with twisted pedicle with thrombosed vessels Absent arterial and venous flow on doppler, Suggestive of left ovarian torsion. Right ovary- normal. Uterus- normal size. Patient was

investigated and taken up for exploratory laparotomy demonstrated 8*4*5 cm with bluish colouration cyst with 2.5 turns of twisted pedicle was noted. Untwisting of the pedicle was performed and left salphingo oophorectomy was performed as the ovary was not salvageable. Specimen was sent for histopathological examination. Histology suggestive of haemorrhagic infarct of left ovary. The patient was discharged on post-operative day3 without any complication.



Figure 1:

Case Report-2

A 13years old girl presented to emergency with complaints of pain in abdomen for 1 day radiating to back. Attained menarche 1 year back. On examination PR-100bpm, BP-110/70mmhg, RR-16cpm and oxygen saturation on room air was 98%. Tenderness with guarding in right iliac fossa and umbilical region.

Ultrasound showed cystic lesion of size 78*93*57 mm with absent arterial and venous flow on doppler Suggestive right ovarian torsion. Leftovarynormal, uterus- Normal. Patient was investigated further and taken up for exploratory laparotomy. Intra operatively 9*8*6 cm haemorrhagic cyst with twisted pedicle of about two turns .Right salphingo-oophorectomy was done because majority of ovarian tissue is necrosed. Specimen was sent for histopathological examination suggestive of simple ovarian cyst with ovarian necrosis. The patient was discharged on post-operative day2 without any complication.

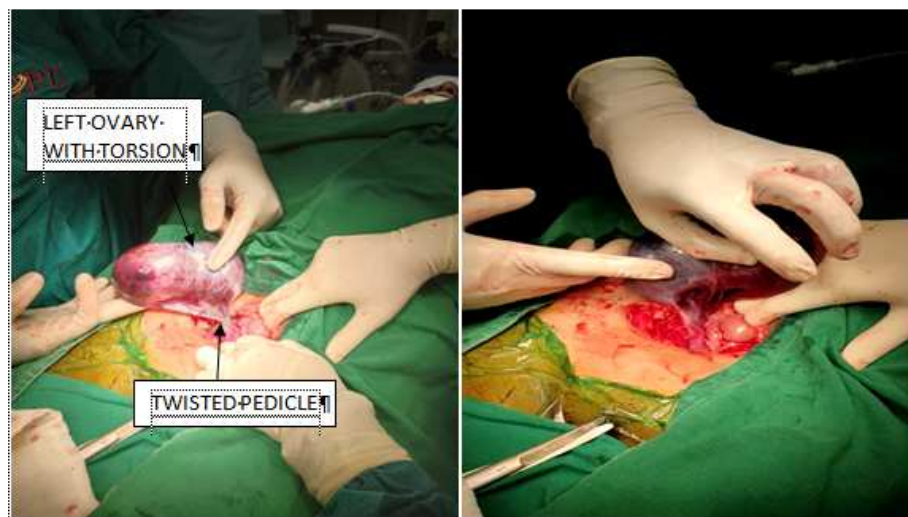


Figure 2:

Case Report-3

A 14 years old female, came with complaint of pain in abdomen for 1 day, which was insidious in onset, stabbing type of pain radiating to back, associated with nausea on and off. History of increase in the intensity of pain during micturition and defecation Menarche attained at 12 years of age. LMP-1/11/2020. On examination PR-110bpm, BP-110/70mmhg, RR-18cpm, oxygen saturation on room air-98% Tenderness, Guarding and rigidity present in the left iliac fossa.

Ultrasound findings were Uterus-normal size. Right ovary normal. Solid lesion measuring 85*55*84mm is noted with absent arterial or venous flow doppler suggestive of left ovarian torsion with haemorrhagic infarct with hemoperitoneum. Patient investigations sent and taken up for exploratory laparotomy. Intra operatively solid haemorrhagic cyst of 9*5*8 cm with two and half turns of twisted pedicle is noted. Left salphingo oophorectomy was done

Specimen was sent for histopathological examination, it revealed haemorrhagic clot with narrow rim of ovarian tissue with infarct. The patient was discharged on post-operative day5 without any complication.

Case Report-4

A 23 years old female, primigravida with 10.2 weeks of gestation came with complaints of severe abdominal pain for 2 days radiating to back. On examination Pulse rate-104bpm, blood pressure -120/70mmhg, RR-18cpm, oxygen saturation on room air-99%. Tenderness present in right iliac fossa. On per vaginal examination- uterus 10-12weeks, right sided fullness, right sided forniceal tenderness present, left side free.

Ultrasound findings Single live intrauterine gestation corresponding to 10+2 weeks. Right ovary of 41*30*32 mm with no vascularity on doppler suggestive of torsion of with oedematous stroma showing haemorrhagic infarction. Left ovary- normal. Patient was investigated further and taken up for exploratory laparotomy. Intraoperatively right haemorrhagic cyst of 5*4*3 cm noted. Right salphingo oophorectomy was performed. Specimen was sent for histopathological examination, it was suggestive of simple ovarian cyst with ovarian necrosis. Patient was discharged on post-operative day3 without any complication.



Figure 3:

Case Report-5

29 years female, P2L1D1A1 with previous caesarean section came to emergency with complaints of pain in abdomen for 1 day associated with 3-4 episodes of vomiting with history of constipation for 2-3 days. Her menstrual cycles were regular. Last menstrual period - 15/3/21. On examination Pulse rate-102bpm, Blood pressure -120/80mmhg, Respiratory rate-

18cpm, oxygen saturation on room air-98%. Tenderness present in right iliac fossa, mass of 18weeks firm in consistency and fixed. Per vaginal examination- Mass approximates 18 weeks, not felt separate from uterus. Right fornix-Full and tender.

Ultrasound showed A cystic lesion of size 92*70*86mm in right adnexa with no vascularity on colour doppler suggestive of torsion. Left ovary- normal. Uterus- normal. Patient investigations were sent and taken up for exploratory laparotomy. Intra operatively 10*8*9 cm haemorrhagic cyst. Right salphingo oophorectomy. Specimen was sent for histopathological examination it was suggestive of haemorrhagic necrosis of cyst and thickened and haemorrhagic ovary and fallopian tube. Patient was discharged onpost-operative day3 without any complication.

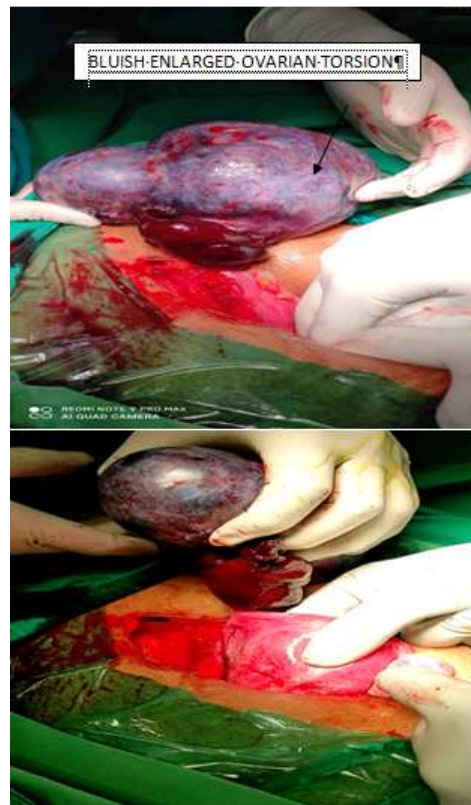


Figure 4:

DISCUSSIONS

Patients undergoing surgery for acute pelvic pain, reported to have ovarian torsion in 2.5 to 7.4% patients. Ovarian torsion being rare gynaecological emergency.^(1,2) 60% of torsions are commonly seen on right side due to long ovarian ligament compared to the left side and sigmoid colon on the left side leading to restricted adnexal movement^(5,6,7)

Risk factors predisposing to ovarian torsion include cyst of > 5cm, ovarian mass usually benign in nature, previous history of ovarian torsion, pregnancy, assisted reproductive techniques, tubal ligation and other pelvic surgeries.^(8,9,10)

Ovary with vascular pedicle twists on the suspensory ligament leading to obstruction of the venous and lymphatic outflow leading to enlargement and oedema of the ovary, further twisting leads to arterial obstruction developing ischemia, haemorrhagic infarction and thrombosis.^(11,12)

Clinically torsion presents with vague symptoms such as abdominal pain, nausea, vomiting and fever with pelvic mass misleading the diagnosis to acute appendicitis, ectopic pregnancy, urinary tract infection, renal colic and diverticulitis. Investigations involves routine hemogram, electrolytes, transabdominal and transvaginal ultrasonography. Ultrasound sensitivity is around 84% in diagnosing torsion.⁽¹³⁾ Enlargement, oedema and haemorrhage of ovarian tissue are the sensitive and consistent changes. Whirlpool sign in the twisted pedicle on doppler is the hallmark sign for torsion.^(14,15)

Considering no specific markers or investigations for diagnosing ovarian torsion. Clinical acumen and ultrasound with doppler changes is standard diagnosis of ovarian torsion. Definitive diagnosis is made by visualisation of the twisted ovary during surgery. Laparoscopy being the golden standard.

Exploratory laparotomy is usually performed when there is evidence of necrotic and haemorrhagic appearance of the ovary. Detorsion of the affected ovary is usually preferred if the ovary is viable without necrosis and discolouration^(16,17), 80% showed normal follicular development with successive ultrasound post operatively.^(18,19,20,21) There are ongoing studies for ovarian fixation or oophoropexy procedure that can be opted for preserving the future fertility and to prevent the recurrence rates of ovarian torsion.^(22,23) Various techniques of ovarian fixation have been described such as to pelvic side wall, posterior uterine wall, sacro-uterine ligament, posterior abdominal wall and the ligamentum teres uteri with or without plication of utero- ovarian ligament^(22,23,24,25,26) The long term studies for this procedure and its complications are still in progress to be considered as the management option for recurrent ovarian torsion and preserving the fertility.

CONCLUSIONS

Early diagnosis is difficult due to delayed presentation and no specific marker present for ovarian torsion. The above case series patients presented to the hospital after 24 to 48 hours after the onset of symptoms which lead to necrosis of tissue and thrombosed vessels, which lead to radical management option i.e. Exploratory laparotomy with salpingo oophorectomy of the affected side.

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